Gizmo Variometer Operating Instructions

The vario has been developed to produce an easy to use instrument that offers both accuracy and reliability. With a little care the instrument will give years of trouble – free operation.

Installation

Mechanical:
The vario can be fitted directly into an 57mm panel aperture or by using a 80mm to 57mm adaptor available separately; it can be mounted in an 80mm aperture. The four M3 mounting screws provided with the instrument **must not be replaced with longer screws – if so they will destroy the lcd graphics display assembly – be warned!**
Should you loose the screws we will supply replacements free of charge.
There is only one pneumatic connection to be made. Connect the total energy source in the glider to the port on the back of the vario. Make sure the connection is air tight – most vario problems in gliders can be traced back to leaky connections. The port is connected to the pressure transducer in the instrument and so it will not affect other instruments connected to the total energy source (it is effectively 'blanked off'.)

Electrical:
A power cable is supplied with the instrument and is to be connected to the battery supply, red to +ve, black to –ve. There is a re-settable fuse in the instrument but it is advisable to ensure that the battery supply also has a fuse for protection. The vario will work off a dc supply of between 8V and 24V

Operation

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To use the vario with the current settings just press button 2 for two seconds and then release it. (The setup screen will show for a short period and then operation will transfer to the vario.) That's it!

The vario can be fully configured to the individual pilots' requirements by using the setup menu. All the menus are controlled using the three buttons. Button 1 is used to move the cursor upwards or increase a value whilst button 3 is used to move the cursor downwards or decrease a value. Button 2 is used to select the item that the cursor is pointing to or to accept the value being displayed. Try working through the menus – don't worry about doing something wrong – the original factory settings can always be restored if you need to start again.

To change the settings:

Power up by pressing button 2 for two seconds and releasing. The Change setup ? screen will display. Press button 3 to go into the setup (if you don't press it within three seconds the instrument will go into vario mode.)
Use buttons 1 and 3 to move the cursor up and down. When the cursor is pointing to the setting that requires changing press button 2. The following can be configured – DAMPING, AUDIO thresholds on up and down (the point at which the audio cuts in), VOLUME and AVERAGER period. The settings can also be restored to the original factory settings by selecting RESTORE.
When the value of a particular function has been set to the desired value, press button 2 to return to the main setup menu. Move the cursor to EXIT and the current settings will be saved to memory and vario mode will be entered. The settings will be recalled next time the instrument is powered up and so will not require setting again, unless a value is to be changed to a different setting.

The factory settings are as follows:

DAMPING:	L/MED (light/medium)
AUDIO UP:	+0.6 Knots
AUDIO DOWN:	-2.0 Knots
VOLUME:	30% of full volume
AVERAGER:	10 second period

Vario Mode

The vario has a bar graph display representation of the lift/sink together with a clear audio signal that is easy to use and follow. The magnitude of the lift is displayed in Knots on the right hand side of the display. The bar graph moves up and down in response to lift and sink and it is very easy to see small changes together with the rate of change. The trend arrow gives an indication of if the lift is increasing (up arrow), decreasing (down arrow) or constant (horizontal arrow.) The averager gives the current average of lift/sink over the period set in the setup (default to 10 seconds.)
The display shows from +10 Knots to –4 Knots in normal mode. If sink greater than 4 Knots is measured the display will change to the sink mode screen which shows sink to –12 Knots. It switches back to normal mode when lift next occurs. The screen will be in normal mode for most of the time.

Volume adjustment in flight
The latest software revision allows the volume level to be changed in flight, without powering the instrument down. When in normal vario mode the volume can be increased by pressing and releasing Switch 1 and decreased with Switch 3. The volume level will be saved and recalled next time the unit is switched on.

Battery Low Indication
A battery monitor runs continuously when the instrument is on and will display a battery symbol in the top left of the display. This will occur when the input voltage falls to 10.5V.

Switch off
Press and hold button 2 for a few seconds until the display goes blank. Then release the switch to power down the vario. Alternatively remove the power.

Maintenance

There are no user serviceable parts within the vario. The fuse is a 'Polyswitch' type that resets itself after any fault condition has been removed.
The printed circuit board has been sprayed with a protective lacquer to help prevent moisture ingress. However, leaving a glider panel full of expensive and delicate electronics in a glider trailer that is exposed to the elements for months at a time is not to be recommended!
For support just call (01550) 779107 – we promise there will be no queuing systems, no 'super market' music and the call is taken within the UK by someone who understands the products!
All Gizmo Instruments have a 12-month warranty. This does not affect your statutory rights.

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